In the claims:

Please cancel claims 1-73 without prejudice or disclaimer to the subject matter contained therein, and insert the following newly submitted claims:

1. - 73. (canceled)

74. (New) A method of delivering a nucleic acid into an organism comprising steps of:

porating a biological membrane at a selected area of the organism to form at least one micropore 1-1000 μm in diameter in said biological membrane comprising the step of ablating the biological membrane by placing a heat conducting element in substantial physical contact with the selected area to deliver sufficient energy by conduction to said selected area of said biological membrane such that the temperature of tissue-bound water and other vaporizable substances in said selected area is elevated above the vaporization point of said water and other vaporizable substances, thereby removing the biological membrane in said selected area; and

contacting the selected area with a nucleic acid under conditions whereby the nucleic acid is taken up into the organism

through the at least one micropore formed in the biological membrane.

75. (New) The method of claim 74, wherein the nucleic acid is DNA.

76. (New) The method of claim 74, wherein the nucleic acid is RNA.

77. (New) A method for delivering a permeant into an organism comprising steps of:

porating a biological membrane at a selected area of the organism to form at least one micropore 1-1000 μm in diameter in said biological membrane, comprising the step of ablating the biological membrane by placing a heat conducting element in substantial physical contact with the selected area to deliver sufficient energy by conduction to said selected area of said biological membrane such that the temperature of tissue-bound water and other vaporizable substances in said selected area is elevated above the vaporization point of said water and other vaporizable substances, thereby removing the biological membrane in said selected area; and

contacting the selected area with a permeant, wherein the permeant is selected from the group consisting of insulin,

interferon and heparin, under conditions whereby the permeant is taken up into the organism through the at least one micropore formed in the biological membrane.

78. (New) A method of delivering a permeant associated with a carrier into an organism comprising steps of:

porating a biological membrane at a selected area of the organism to form at least one micropore 1-1000 μm in diameter in said biological membrane comprising the step of ablating the biological membrane by placing a heat conducting element in substantial physical contact with the selected area to deliver sufficient energy by conduction to said selected area of said biological membrane such that the temperature of tissue-bound water and other vaporizable substances in said selected area is elevated above the vaporization point of said water and other vaporizable substances thereby removing the biological membrane in said selected area; and

contacting the selected area with the carrier under conditions whereby the permeant associated with the carrier is taken up into the organism through the at least one micropore formed in the biological membrane; wherein the carrier comprises liposomes, lipid complexes, microparticles, or polyethylene glycol compounds; and optionally,

wherein the carrier is formulated to have a charge.

79. (New) The method of claim 78, wherein the carrier comprises liposomes.

80. (New) The method of claim 78, wherein the carrier comprises lipid complexes.

81. (New) The method of claim 78, wherein the carrier is formulated to have a charge.

82. (New) The method of claim 78, wherein the carrier comprises microparticles.

83. (New) The method of claim 78, wherein the carrier comprises polyethylene glycol compounds.

84. (New) An apparatus for delivering a dry powder formulation into an organism comprising:

a heat source, which, when put in substantial physical contact with a selected area of a biological membrane of the organism, is capable of porating the biological membrane at the selected area to form at least one micropore 1-1000 μm in diameter, by delivering sufficient energy to the selected area such that the temperature of tissue-bound water and other vaporizable substances in the selected area is elevated above the

vaporization point of the water and other vaporizable substances, thereby removing the biological membrane in the selected area, and wherein the apparatus enables the dry powder formulation, when the dry powder formulation is put in contact with the selected area, to be taken up through the micropore into the organism, wherein the apparatus delivers the dry powder formulation into the organism.

85. (New) The apparatus of claim 84, wherein the dry powder formulation comprises a peptide(s), protein(s), vaccine antigen, DNA or RNA.

86. (New) The apparatus of claim 84, wherein the dry powder comprises adenovirus.

87. (New) The apparatus of claim 84, wherein the dry powder formulation comprises microparticles.

88. (New) The apparatus of claim 87, wherein said microparticles comprise a bioactive agent(s).

89. (New) The apparatus of claim 88, wherein said bioactive agent(s) is selected from the group consisting of peptide(s), protein(s), vaccine antigen(s), DNA or RNA.

90. (New) The apparatus of claim 89, wherein said DNA or RNA is naked, fragmented, encapsulated or coupled to another agent.

91. (New) An apparatus for delivering a bioactive agent into an organism comprising:

a heat source, which, when put in substantial physical contact with a selected area of a biological membrane of the organism, is capable of porating the biological membrane at the selected area to form at least one micropore 1-1000 μm in diameter, by delivering sufficient energy to the selected area such that the temperature of tissue-bound water and other vaporizable substances in the selected area is elevated above the vaporization point of the water and other vaporizable substances, thereby removing the biological membrane in the selected area, and wherein the apparatus enables the bioactive agent, when the bioactive agent is put in contact with the selected area, to be taken up through the micropore into the organism, wherein said bioactive agent is put in contact with the selected area in a form selected from the group consisting of a tablet, a bio-erodable matrix and an adhesive polymer, wherein said bio-erodable matrix and adhesive polymer matrix are fabricated in a manner to allow the bioactive agent to be released into the organism via the mircropore, wherein the apparatus delivers the bioactive agent into the organism.

92. (New) A system for stimulating an immune response in an organism wherein a permant is delivered into the organism comprising:

a heat source, which, when put in substantial physical contact with a selected area of a biological membrane of the organism, is capable of porating the biological membrane at the selected area to form at least one micropore 1-1000 μm in diameter and at a depth coincident with increased concentration of langerhans cells, by delivering sufficient energy to the selected area such that the temperature of tissue-bound water and other vaporizable substances in the selected area is elevated above the vaporization point of the water and other vaporizable substances, thereby removing the biological membrane in the selected area, and wherein the system enables the permant, when the permant is put in contact with the selected area, to be taken up through the micropore into the organism, wherein the system stimulates the immune response in the organism.

93. (New) The system of claim 92, wherein the depth of the micropore is 180 microns to 250 microns.

94. (New) The system of claim 92, wherein the organism is a human or an animal.

95. (New) The system of claim 92, wherein the organism is a human.

96. (New) The system of claim 92, wherein the permeant is a vaccine.

97. (New) The system of claim 96, wherein the vaccine comprises DNA or RNA.

98. (New) A process for introducing a permeant into an organism in order to stimulate an immune response in the organism, comprising delivering the permeant into the epidermis at a depth coincident with increased concentration of langerhans cells via micropores formed using the system of claim 92.

99. (New) The process of claim 98, wherein the surface area of the selected area of the biological membrane is greater than the total areas of the micropores.

100. (New) A system for delivering a dry powder formulation into an organism comprising:

a heat source, which, when put in substantial physical contact with a selected area of a biological membrane of the organism, is capable of porating the biological membrane at the

selected area to form at least one micropore 1-1000 μm in diameter, by delivering sufficient energy to the selected area such that the temperature of tissue-bound water and other vaporizable substances in the selected area is elevated above the vaporization point of the water and other vaporizable substances, thereby removing the biological membrane in the selected area, and wherein the system enables the dry powder formulation, when the dry powder formulation is put in contact with the selected area, to be taken up through the micropore into the organism, wherein the system delivers the dry powder formulation into the organism.

101. (New) The system of claim 100, wherein the dry powder formulation comprises a peptide(s), protein(s), vaccine antigen(s), DNA or RNA.

102. (New) The system of claim 100, wherein the dry powder formulation comprises microparticles.

103. (New) The system of claim 102, wherein said microparticles comprise a bioactive agent(s).

104. (New) The system of claim 103, wherein said bioactive agent(s) is selected from the group consisting of peptide(s), protein(s), vaccine antigen(s), DNA or RNA.

105. (New) The system of claim 104, wherein said DNA or RNA is naked, fragmented, encapsulated or coupled to another agent.

106. (New) A system for delivering a bioactive agent into an organism comprising:

a heat source, which, when put in substantial physical contact with a selected area of a biological membrane of the organism, is capable of porating the biological membrane at the selected area to form at least one micropore 1-1000 μm in diameter, by delivering sufficient energy to the selected area such that the temperature of tissue-bound water and other vaporizable substances in the selected area is elevated above the vaporization point of the water and other vaporizable substances, thereby removing the biological membrane in the selected area, and wherein the system enables the bioactive agent, when the bioactive agent is put in contact with the selected area, to be taken up through the micropore into the organism, wherein said bioactive agent is put in contact with the selected area in a form selected from the group consisting of a tablet, a bio-erodable matrix and an adhesive polymer, wherein said

bio-erodable matrix and adhesive polymer matrix are fabricated in a manner to allow the bioactive agent to be released into the organism via the mircropore, wherein the system delivers the bioactive agent into the organism.